ABSTRACT OF THE DISCLOSURE

A system and method is disclosed for controlling the input electrical current to an infusion pump stepper motor based on predetermined torque requirements. The system can include a motor controller and a non-volatile memory containing expected load torque values throughout a pump cycle. Responsive to the expected load torque values, the motor controller provides the stepper motor with a varying electrical current for overcoming load torque at each point in the pumping cycle. Additional factors can also be considered for varying the electrical current. These factors include, but are not limited to, temperature, pressure, and elapsed operating time.